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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/789,995

03/02/2004

Masafumi Kyogaku

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03/14/2006

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EXAMINER

RAABE, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/789,995

Applicant(s)

KYOGAKU, MASAFUMI

Examiner

Christopher M. Raabe

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5 and 12-19 is/are allowed.
- 6) ☒ Claim(s) 1 and 6-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/30/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Amendment filed December 27, 2005 has been entered and acknowledged by the examiner.
2. Applicant's arguments filed December 27, 2005 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,6-11 rejected under 35 U.S.C. 102(b) as being anticipated by Kawate et al. (US Pre-grant Publication 2002/0060516).

With regard to claim 1,

Kawate et al. disclose an electron-emitting device, comprising: a cathode electrode (3 of fig 2b) and a gate electrode (2 of fig 2b), which are located on a surface of a substrate (1 of fig 2b) and opposed to each other with a space therebetween (fig 2b); and a film containing an electron-emitting material, which is located on the cathode electrode (5 of fig 2b), wherein the film has two end portions, which are located in a plane substantially parallel to the surface and are located in a direction substantially perpendicular to a direction in which the cathode electrode and the gate electrode are opposed to each other (fig 2a), wherein at least one of the

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cathode electrode and the gate electrode has a structure (2, 3 of fig 2b). The phrase "for making electric field strengths applied between each of the two end portions of the film and the gate electrode weaker than an electric field strength applied between a region between the two end portions and the gate electrode, at a time of driving" does not structurally distinguish the claimed invention from the prior art, as is required of apparatus claims.

With regard to claim 6,

Kawate et al. disclose an electron-emitting device, wherein the film comprises a plurality of fibrous conductive materials (4 of fig 2b).

With regard to claim 7,

Kawate et al. disclose an electron-emitting device, wherein the film contains mainly carbon (paragraph 80).

With regard to claim 8,

Kawate et al. disclose an electron-emitting device, wherein the film comprises a plurality of carbon fibers (paragraph 80).

With regard to claim 9,

Kawate et al. disclose an electron-emitting device, wherein each of the plurality of carbon fibers includes at least one of a carbon nanotube, a graphite nanofiber, an amorphous carbon fiber, and a diamond fiber (paragraph 80).

With regard to claim 10,

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Kawate et al. disclose an electron source, comprising: a plurality of electron-emitting devices (paragraph 111).

With regard to claim 11,

Kawate et al. an image display apparatus, comprising: an electron source; and a light emitting member (paragraph 111).

Allowable Subject Matter

5. Claims 2-5, 12-19 are allowed.

With regard to claims 2-5,

Since amendments to claims 2-5 did not alter their scope, claims 2-5 are allowed for the reasons presented in the office action sent September 21, 2005.

With regard to claims 12-19,

Newly presented claims 12-19 are allowed as a result of their dependence on claim 2,3,4 or 5.

Response to Arguments

6. The applicant argues (p 8,9) that nothing in Kawate et al. would teach or suggest the structural features set forth in claim 1. The examiner asserts that Kawate et al. does teach the structural features of claim 1, as the phrase "for making electric field strengths applied between each of the two end portions and the gate electrode weaker than an electric field strength

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applied between a region between the two end portions and the gate electrode, at a time of driving" does not structurally define the invention. Hence the rejection of claim 1 is maintained.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Raabe whose telephone number is 571-272-8434. The examiner can normally be reached on m-f 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CR


ASHOK PATEL
PRIMARY EXAMINER